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STATE OF MONTANA

DEPARTMENT OF STATE LANDS

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December 23, 1974

Attached is the final statement in the form of an addendum to the draft Environmental Impact Statement prepared by the Department of State Lands on the proposed continuation and expansion of WECo's Rosebud Mine at Colstrip, Montana. final statement This addendum covers the proposed Area A-1 of the Rosebud Mine and includes only additional information and changes submitted to the Department by WECo since the issuance of the draft. The reader is referred to the draft statement for all information not reiterated in this statement.

All materials submitted to the Department by WECo as part of their application for a permit under the Montana Strip Mining and Reclamation Act (Chapter 10, Title 50, R.C.M. 1947) are on file and open to public review at the Department's offices in Helena.

This addendum will serve as the detailed statement on Area A-1 prepared in compliance with § 69-6504(b)(3) of the Montana Environmental Policy Act (MEPA).

Sincerely,

Sharon M. Solomon
Sharon M. Solomon
Environmental Coordinator

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FINAL ENVIRONMENTAL IMPACT STATEMENT

ADMINISTRATIVE ACTION - Proposed Approval of a Strip Mining Permit for the Continuation of Western Energy Company's Rosebud Mine at Colstrip, Montana - Area A-1

Submitted Pursuant to the Montana Environmental Policy Act Section 69-6504(b)(3), R.C.M. 1947

Prepared by

MONTANA DEPARTMENT OF
STATE LANDS

HELENA, MONTANA
December 23, 1974

INTRODUCTION

On November 21, 1973, a draft environmental impact statement was released by the Department of State Lands on the proposed approval of a strip mining permit for the continuation of Western Energy Company's Rosebud Mine at Colstrip. Due to inadequacies in the information provided in the application materials submitted to the Reclamation Division pursuant to the requirements of Title 50, Chapter 10, R.C.M. 1947, the Montana Strip Mining and Reclamation Act, Area A-1, which was considered in the draft, was deleted from the original permit granted to WECo in December,1973. WECo has corrected those inadequacies and has reapplied for a permit to mine Area A-1.

Although no comments were received specifically on Area A-1 as covered in the 1973 draft environmental impact statement, the Department deems it necessary, in view of the changes in mining plan and additional information submitted on that area, to issue a final impact statement supplementing but not reiterating the information in the draft and outlining the current level of knowledge and proposed mining plan for Area A-1. Any material in this statement that conflicts with that in the draft will supercede the information in the draft. This final statement will be an addendum to the draft environmental impact statement and will serve as the detailed statement mandated by § 69-6504 (b)(3) of MEPA.

DESCRIPTION OF AREA

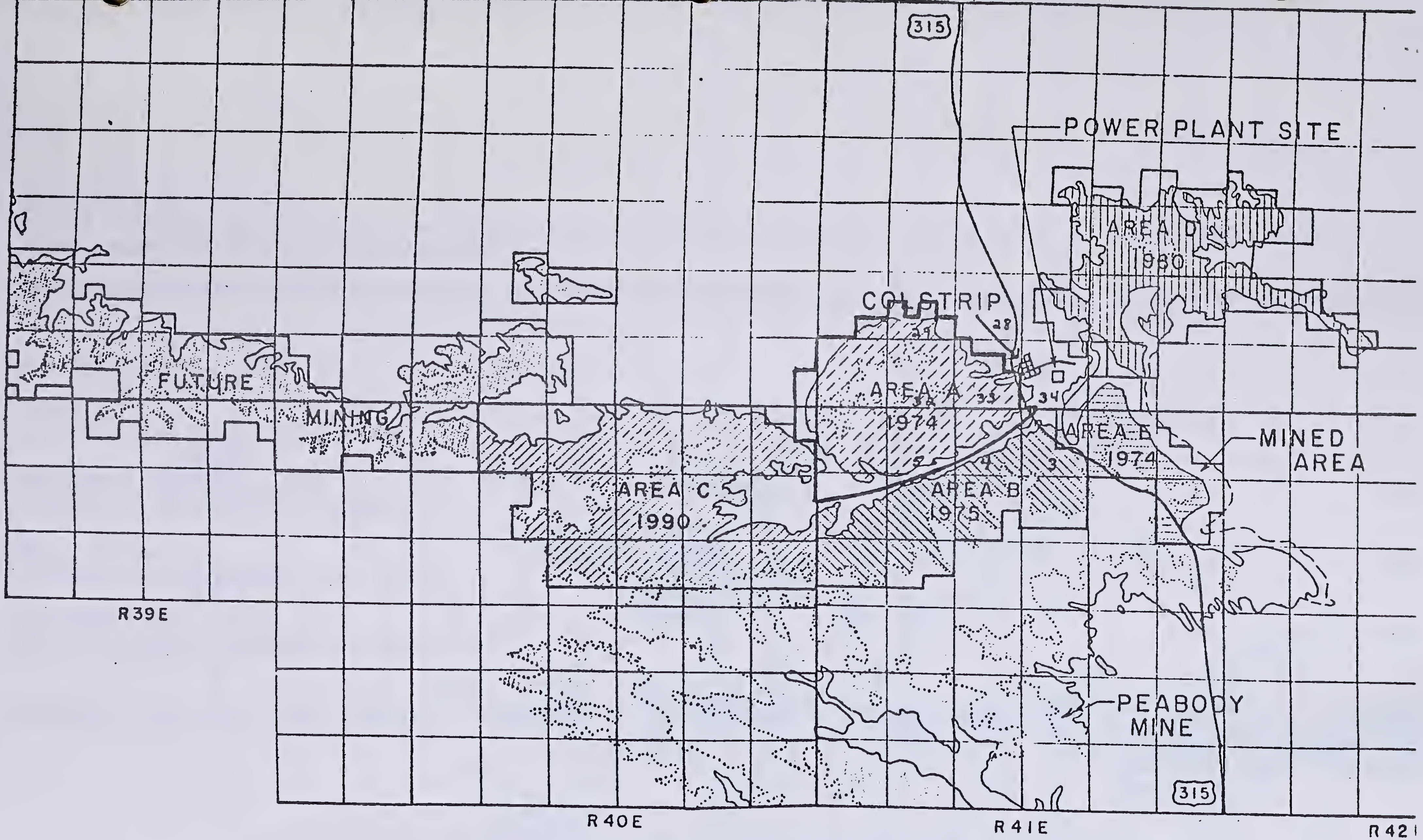
WECo has proposed five areas to be mined in future years in the Colstrip area, Areas A, B, C, D, and E, and a possible sixth, designated future mining, in addition to the area in which they are currently concluding their mining, Pit 6. The area proposed to be permitted, Area A-1, is the first segment of a possible complete area, A (See Figure I).

The total area of land to be affected in conjunction with the permit for Area A-1 is approximately 602 acres. Of this, 364 acres are proposed for mining and spoiling, 128 acres for haul and access roads, and 110 acres for associated disturbance. The acreage encompasses the NW 1/4 NW 1/4 of Section 3 and all of Sections 4 and 5, T1N, R41E; and the SW 1/4 SW 1/4 of Section 28; the SE 1/4 SE 1/4 of Section 29; the E 1/2 E 1/2 of Section 32, all of Section 33 and the SW 1/4 SW 1/4 of Section 34, T2N, R41E and lies directly east of the town of Colstrip across Highway 315. The coal from Area A-1 is designated to fulfill contractual obligations to Wisconsin Power and Light.

PHYSICAL FEATURES

Vegetation

All sections proposed to be permitted were described in the draft statement with the exception of approximately 80 acres in Sections 28 and 29, T2N, R41E. Five community types were found in these two sections. Table I lists these types and associated data.



Western Energy Company's Rosebud Mine
(adapted from Matson & Blumer, 1973; DNR, 1974)

~ Limit of Rosebud

..... 150 ft. overburden limit

Figure I

TABLE I

RANGE CONDITION CLASSIFICATION AND STOCKING RATES OF FIVE COMMUNITY TYPES ON THE WESTERN ENERGY 1975 MINING AREA A_1 EXTENSION

Community Type and Code Number[1]	Extent[2]	Range Site[3]	Condition Classification[3]	Recommended Stocking Rate[3]	Actual Stocking Rate
Pinus ponderosa-*Agropyron spicatum*-*Carex* spp. (Code 3)	30.5%/24	Sandy	Excellent	0.40	0.34
Artemisia cana-*Bromus* spp. *Poa* spp. (Code 5)	18.3%/15	Silty	Good	0.30	0.34
Artemisia cana-*Stipa viridula*-*Agropyron smithii* (Code 6)	5.9%/ 5	Overflow	Fair	0.20	0.34
Stipa comata-*Carex filifolia* (Code 7)	24.3%/19	Silty	Good	0.30	0.34
Cultivated Land (Code 8)	21.0%/17	----	----	----	----

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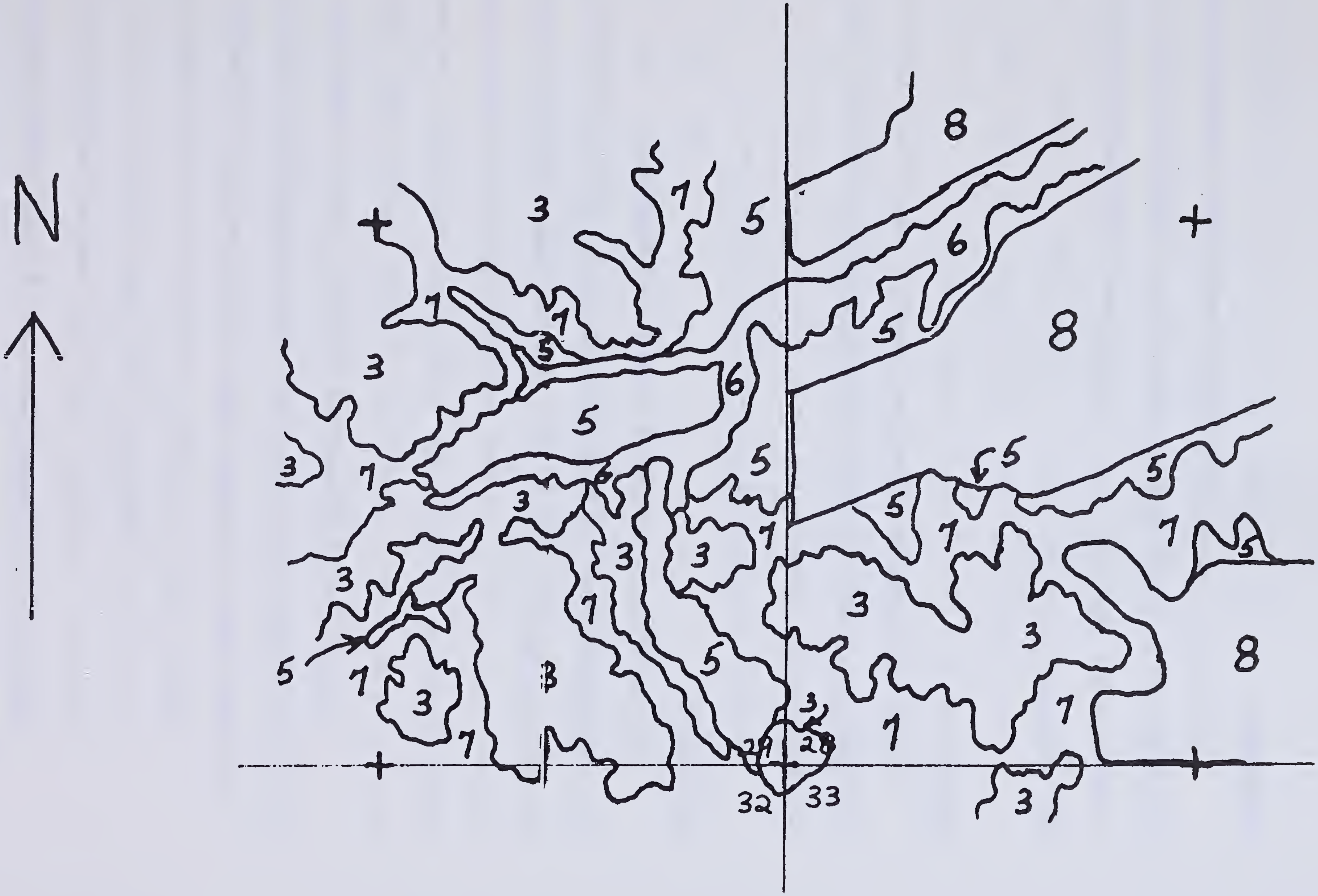
[1] Code number corresponds with Figure 2
[2] Total area of the extension = approximately 80 acres. Percent composition of the area/acreage.
[3] Follows SCS criteria.

(ECS, 1974)

Figure 2:



Wildlife

Species of wildlife present were discussed in the draft Environmental Impact Statement. No new species have been found in subsequent studies nor have any new critical habitat areas been discovered.

Soils

The soil series found in Area A-1 are described in the draft. An additional soil survey was completed on Sections 28 and 29. No new soil series was found.

Overburden

Five drill holes were cored and sampled in Area A-1 to meet the requirements of overburden and interburden analysis as related to revegetation found in the reclamation act and its pursuant regulations. The results of the analyses are presented in Appendix I. Based on those results the reclamation division recommends the following actions for handling certain layers when regrading spoils:

N 51 E 53 - Suitable to 40 feet. From 40-45 feet there is high zinc (75.0 ppm) but when mixed with other overburden materials, it should be diluted to a non-toxic level. No special spoil handling procedure is indicated.

N 52 E 50 - Moderate salts were found in the 0-40 foot sections; however, in mixture with the coarse textured materials no problems are indicated. The 40-50 foot layer has high salinity while the layer from 62-68 feet has high concentrations of both zinc (72.5 ppm) and nickel (3.6 ppm). Both of these layers should be buried below 8 feet of the surface. The layer from 62-68 feet appears to present no problems.

N 55 E 49 - Both the 5-10 foot layer and the 60-97 foot layer have high SAR values (14.10 meq/liter; 8.7-12.2 meq/liter) and should not be placed on the surface of the regraded spoils. The interburden has high lead (1.4-6.3 ppm) and nickel (0.6-1.8 ppm) and should be placed below 8 feet if it is disturbed.

N 51 E 50 - Lead and nickel are in relatively high concentrations in the 10-20 foot level but when mixed with the layers to 80 feet which show no problems should be diluted to non-toxic levels. Any materials below 80 feet should be buried at least 8 feet deep.

N 53 E 49 - The layer from 5-20 feet is strongly saline; the layer from 20-25 feet has high lead (4.0 ppm); and the layer below 90 feet has high zinc content (200 ppm). All three layers should be buried.

Hydrology

The draft statement discusses hydrologic problems to date.

A storage tank supplying water to the town of Colstrip is located on Section 33. WECo has indicated that this supply is not essential and will be replaced.

Mining plan

WECo's mining plan for Area A-1 is represented on Figure 3.

The equipment to be used for the area includes the following:

1	Marion Model 8050 Dragline
1	280-B Bucyrus-Erie Coal Loader
1	45 R Bucyrus-Erie Overburden Drill
1	Failing Coal Drill
1	D9G Caterpillar Crawler/9C Dozer
1	D9G " " /9U Dozer
1	D8H " " /9U Dozer
1	14G Caterpillar Roadgrader
3	631C Caterpillar Scrapers
1	992 Caterpillar Front-end Loader
4	120-T Euclid Coal Haulers
2	8000 Gal. Klien Water Tankers

All specifications of the reclamation law and its pursuant rules and regulations will be followed during mining and reclamation activities. No exceptions are requested or anticipated.

In order to mine the Area A-1 as proposed, WECo requested the Rosebud County Commissioners to allow abandonment of a portion of the Castle Rock Road west of Colstrip. This request was granted contingent upon relocation of the road at the company's expense. This relocation is presently ongoing. The resolution of abandonment is attached as Appendix 2.

WECo presently does not anticipate mining the McKay seam under the provisions of the Coal Conservation Act. However, if that coal should prove to be marketable sometime in the future the mining plan may have to be changed.

Literature Cited

Ecological Consulting Service. 1974. Report to Western Energy Company: 1975 permit requirements for wildlife and vegetation areas A_1 and E_2 (project No. 82-23-A). August 15.

Matson, R.E., and J. W. Blumer. 1973. Quality and reserves of strippable coal, selected deposits, southeastern Montana. Montana Bureau of Mines and Geology Bulletin 91.

Montana Department of Natural Resources and Conservation. 1974. Draft environmental impact statement - The Proposed Montana Power Company, Puget Souht Power & Light Company, Portland General Electric Company, Pacific Power and Light Company, and Washington Water Power Company, Colstrip Electric Generating Units 3 & 4, 500 Kilovolt KV Transmission Lines from Colstrip to Hot Springs, Montana, and Associated Facilities.

APPENDIX I

Table / Chemical Properties of Soil for Overburden and Interburden Materials Associated with Coal Areas.
Western Energy Coal Company , Area A.

Hole # N55 E49

				Saturation Extract				
					Cations			
Lab No.	Depth	pH Paste	Sat'n. %	Elect. Cond. mmhos/cm	Ca	Mg	Na	SAR
					- - - -	meq/liter - - - -	- -	
4272	0-5	[illegible]	[illegible]	[illegible]				
4273	5-10	8.0	49.9	8.5	15.0	26.2	64.0	14.10
4274	10-15	8.0	54.0	5.9	19.0	21.3	30.8	6.84
4275	15-20	8.1	33.6	3.7	5.0	15.8	17.5	5.43
4276	20-25	8.0	43.1	2.5	3.0	7.4	12.0	5.26
4277	25-30	8.2	51.1	2.0	1.9	4.1	9.0	5.21
4278	30-35	8.1	52.0	2.1	2.5	4.3	11.5	6.24
4279	35-40	8.1	52.0	2.2	1.5	4.8	13.0	7.41
4280	40-45	8.1	35.6	3.4	14.6	12.3	17.2	5.90
4281	45-50	8.0	51.8	2.2	2.0	5.6	11.3	5.60
4282	50-55	8.0	40.5	2.7	2.5	7.0	13.4	6.21
4283	55-60	8.0	41.1	2.6	2.5	7.0	15.2	7.01
4284	60-65	7.9	42.3	2.9	2.0	6.2	17.6	8.70
4285	65-70	8.0	49.6	2.5	0.25	3.9	15.2	10.50
4286	70-75	8.0	47.3	2.9	8.5	3.8	18.3	7.39
4287	75-80	8.3	30.7	2.8	1.5	3.1	18.0	11.80
4288	80-85	8.3	32.9	3.2	4.0	3.3	22.3	11.70
4289	85-90	8.2	35.4	3.1	4.0	2.5	20.9	11.70
4290	90-97	7.3	47.9	6.5	6.0	16.0	40.4	12.20
4291	120-125	7.4	45.0	3.8	0.25	14.1	14.2	5.29
4292	125-130	7.3	35.6	3.2	11.3	11.1	11.1	3.33
4293	130-135	7.2	35.6	4.2	19.5	19.5	12.2	2.76
4294	135-140	7.4	36.6	3.2	13.8	14.8	10.4	2.76
4295	140-145	7.1	35.5	3.0	9.5	11.1	9.4	2.93
4296	145-150	7.1	36.1	4.0	19.0	17.6	10.3	2.40
4297	150-155							
4298	155-160							
4299	160-165							
4300	165-170							
4301	170-176							

Table 2 Results of Mechanical Analysis (Hydrometer Method) with Micro Nutrients and Nitrates. Western Energy Coal Company Overburden and Interburden, Area A

Hole # N55 E49

Lab No.	Depth ft	% Clay	% Silt	% Sand	Texture	Zn	Fe	Cu	Mn	NO_3
4272	0-5	47.8	26.4	25.8	C	6.0	11.2	1.4	2.8	0.25
4273	5-10	29.8	34.4	35.8	Cl	0.76	10.0	1.1	2.4	0.25
4274	10-15	16.2	19.0	64.8	SL	1.5	10.9	1.1	9.5	0.50
4275	15-20	18.8	16.4	64.8	SL	0.46	10.2	0.4	8.9	0.25
4276	20-25	41.2	46.0	12.8	SiC	5.6	13.5	1.0	8.9	0.25
4277	25-30	48.4	40.8	10.8	SiC	2.3	9.3	1.4	8.6	0.25
4278	30-35	46.8	33.2	20.0	C	1.24	11.5	1.2	6.4	0.25
4279	35-40	45.6	33.2	21.2	C	0.38	10.6	1.0	7.0	0.25
4280	40-45	45.4	32.6	22.0	C	18.2	10.9	1.8	11.1	0.25
4281	45-50	49.2	36.0	14.8	C	9.0	13.9	1.4	7.0	0.25
4282	50-55	28.6	29.8	41.6	Cl	9.6	10.2	1.4	5.8	0.25
4283	55-60	34.6	53.4	12.0	SiCL	1.96	9.2	2.3	4.8	0.25
4284	60-65	38.4	29.6	32.0	Cl	24.8	11.9	1.4	5.8	0.25
4285	65-70	57.6	31.4	11.0	C	10.0	10.2	2.0	4.2	0.25
4286	70-75	49.0	34.4	16.6	C	6.0	10.9	1.1	6.4	0.25
4287	75-80	44.6	23.0	32.4	C	3.62	12.2	1.2	6.4	0.25
4288	80-85	19.0	29.0	52.4	SL	25.6	10.6	0.9	7.0	0.25
4289	85-90	36.6	34.6	28.8	CL	31.2	10.0	1.4	7.0	0.25
4290	90-97	32.8	39.4	27.8	CL	9.0	16.2	1.8	7.4	23.80
4291	120-125	33.4	39.2	27.4	CL	4.8	20.0	3.6	4.4	0.25
4292	125-130					6.0	28.2	2.0	4.4	0.50
4293	130-135					3.3	30.0	1.4	6.7	0.50
4294	135-140					1.76	30.0	1.6	6.7	0.25
4295	140-145					7.6	7.5	1.1	7.6	0.50
4296	145-150					9.35	66.0	1.0	5.8	0.25
4297	150-155					19.0	100.0	1.4	12.0	1.25
4298	155-160					4.4	58.0	0.9	6.4	1.85
4299	160-165					2.7	55.0	1.2	6.4	1.25
4300	165-170					44.0	30.0	0.9	10.8	1.25
4301	170-176					9.6	70.0	1.0	14.8	1.25

Table 3 Chemical Analysis of Overburden and Interburden Materials Associated with Coal Areas.
Western Energy Coal Company Area A

Hole # N55 E49

Lab No.	Depth feet	Ex.NH$_4$ (ppm)	Se (ppm)	Hg (ppb)	B (ppm)	Pb (ppm)	Cd (ppm)	Ni (ppm)	Mo (ppm)	CEC meq/100gr
4272	0-5	4.0	<0.5	40.0	0.7	2.1	<0.3	<0.4	0.06	18.0
4273	5-10	6.0	<0.5	46.0	0.6	1.2	<0.3	<0.4	0.09	14.5
4274	10-15	8.0	<0.5	24.0	0.4	1.2	<0.3	<0.4	0.065	3.0
4275	15-20	11.0	<0.5	320.0	0.4	1.2	<0.3	<0.4	0.055	4.5
4276	20-25	15.0	<0.5	40.0	0.4	1.7	<0.3	<0.4	0.065	6.0
4277	25-30	17.0	<0.5	41.0	0.3	1.8	<0.3	<0.4	0.065	9.5
4278	30-35	18.0	<0.5	34.0	0.4	1.4	<0.3	<0.4	0.065	9.5
4279	35-40	16.0	<0.5	46.0	0.4	0.9	<0.3	<0.4	0.065	8.0
4280	40-45	17.0	<0.5	30.0	0.4	0.8	<0.3	<0.4	0.055	9.5
4281	45-50	14.0	<0.5	230.0	0.4	0.9	<0.3	<0.4	0.05	7.0
4282	50-55	21.0	<0.5	40.0	0.4	0.5	<0.3	<0.4	0.05	4.5
4283	55-60	11.0	<0.5	76.0	0.4	0.6	<0.3	<0.4	0.055	5.5
4284	60-65	14.0	<0.5	250.0	0.3	0.6	<0.3	<0.4	0.07	5.0
4285	65-70	12.0	<0.5	360.0	0.4	0.7	<0.3	<0.4	0.05	7.0
4286	70-75	14.0	<0.5	42.0	0.3	0.2	<0.3	<0.4	0.065	5.5
4287	75-80	15.0	<0.5	28.0	0.3	0.6	<0.3	<0.4	0.075	3.0
4288	80-85	8.0	<0.5	24.0	0.3	0.4	<0.3	<0.4	0.045	3.0
4289	85-90	13.0	<0.5	48.0	0.4	0.5	<0.3	<0.4	0.05	4.5
4290	90-97	7.0	<0.5	24.0	4.9	1.3	<0.3	<0.4	0.55	41.0
Coal	97-120									
4291	120-125	26.0	<0.5		2.2	6.3	<0.3	0.6	0.28	11.0
4292	125-130	27.0	<0.5		1.1	4.5	<0.3	1.5	0.26	4.0
4293	130-135	17.0	<0.5		1.0	2.7	<0.3	1.0	0.25	3.0
4294	135-140	18.0	<0.5		1.4	2.9	<0.3	1.2	0.44	4.5
4295	140-145	12.0	<0.5		2.3	2.7	<0.3	1.8	0.36	5.5
4296	145-150	17.0	<0.5		1.5	2.0	<0.3	1.4	0.31	4.5
4297	150-155	14.0	<0.5		2.0	1.8	<0.3	1.8	0.40	ns
4298	155-160	12.0	<0.5		2.2	1.4	<0.3	1.0	0.38	4.5
4299	160-165	16.0	<0.5		2.5	2.8	<0.3	1.2	0.24	ns
4300	165-170	16.0	<0.5		2.2	2.2	<0.3	1.6	0.27	ns
4301	170-176	14.0	<0.5		3.7	2.2	<0.3	1.0	0.28	29.5

Table 4 Chemical Properties of Soil for Overburden and Interburden Materials Associated with Coal Areas. Western Energy Coal Company, Area A.

Hole # N51 E50

Lab No.	Depth ft	pH Paste	Sat'n. %	Elect. Cond. mmhos/cm	Saturation Extract Cations Ca	Saturation Extract Cations Mg	Saturation Extract Cations Na	SAR
					- - - - -	meq/liter	- - - - -	
4302	0-5	7.8	33.7	0.51	3.1	0.1	0.61	0.48
4303	5-10	7.5	30.4	2.5	26.5	4.8	0.48	0.12
4304	10-15	6.8	34.8	2.9	27.5	10.0	0.78	0.18
4305	15-20	7.6	59.0	2.6	20.0	9.3	1.1	0.28
4306	20-25	7.7	29.9	2.2	17.8	8.2	1.2	0.33
4307	25-30	7.7	37.3	1.1	6.3	4.2	1.4	0.61
4308	30-35	8.1	37.9	0.86	2.5	4.3	1.1	0.59
4309	35-40	8.0	36.4	0.80	2.1	3.9	1.2	0.699
4310	40-45	8.2	34.6	0.68	1.6	3.1	1.1	0.72
4311	45-50	8.3	34.5	0.57	1.0	2.6	1.3	0.97
4312	50-55	7.9	20.7	1.0	3.4	4.8	1.48	0.73
4313	55-60	7.9	32.2	0.78	2.1	3.8	1.2	0.68
4314	60-65	7.7	28.6	2.8	21.3	12.7	1.7	0.41
4315	65-70	7.9	27.3	1.3	6.8	7.5	1.6	0.49
4316	70-75	8.0	28.0	0.92	4.5	4.2	1.3	0.62
4317	75-80	8.0	32.1	1.1	3.1	5.7	1.6	0.77
4318	80-85	8.0	30.8	1.1	3.4	5.3	1.6	0.77
4319	85-90	8.0	27.5	0.72	1.9	2.8	1.3	0.84
4320	90-95	8.0	30.3	1.0	3.6	5.9	1.9	0.88
4321	95-100	8.0	28.7	1.2	3.9	6.7	2.2	0.97
4322	100-105	8.0	30.6	1.5	4.8	7.7	2.8	1.13
4323	105-110	*						
4324	110-115	8.1	36.4	2.4	6.8	12.1	5.6	0.13
4325	115-120	7.9	35.0	4.3	14.3	22.5	7.1	1.66
4326	120-125	7.6	55.9	3.8	8.3	16.1	8.0	2.29
4327	148-150	6.6	42.2	4.0	11.3	9.6	8.3	2.58
4328	150-155							
4329	155-160							
4330	160-165							
4331	165-170							
4332	170-175							
4333	175-180							
4334	180-185	7.2	44.6	3.9	20.0	23.8	7.7	1.64
4335	185-190	7.5	61.4	3.0	13.0	15.8	7.9	2.08
4336	190-197	7.2	30.2	3.1	13.5	14.8	7.5	1.95

Table 5 Results of Mechanical Analysis (Hydrometer Method) with Micro Nutrients and Nitrates.
Western Energy Coal Company Overbudden and Interburden, Area A

Hole # N51 E50

Lab No.	Depth ft	% Clay	% Silt	% Sand	Texture	Zn	Fe	Cu	Mn	NO_3
4302	0-5	7.0	7.0	86.0	LS	14.0	4.0	0.8	4.2	3.00
4303	5-10	7.4	6.6	86.0	LS	13.2	5.8	0.5	4.2	1.25
4304	10-15	46.4	18.8	34.8	C	19.6	60.0	2.8	7.6	0.25
4305	15-20	39.2	27.6	33.2	CL	8.0	49.0	3.6	1.4	0.25
4306	20-25	12.6	36.8	50.6	L	4.8	11.2	0.6	6.4	0.25
4307	25-30	29.2	38.8	32.0	CL	3.8	58.0	1.2	15.8	0.25
4308	30-35	20.8	20.8	58.4	SCL	0.81	12.8	0.8	3.4	0.25
4309	35-40	16.2	20.4	63.4	SL	1.40	12.2	1.0	4.2	0.25
4310	40-45	9.6	8.4	82.0	LS	3.3	17.0	0.5	3.2	0.25
4311	45-50	8.5	7.1	84.4	LS	1.46	10.0	0.8	2.0	0.25
4312	50-55	8.7	8.1	83.2	LS	1.18	10.2	0.8	3.4	0.50
4313	55-60	8.0	7.8	84.2	LS	1.54	7.8	0.5	2.0	0.50
4314	60-65	8.5	5.1	86.4	LS	0.60	11.5	0.6	3.2	1.25
4315	65-70	7.5	5.6	86.9	LS	3.5	11.2	0.5	3.2	1.25
4316	70-75	11.4	5.9	82.7	LS	0.68	9.8	0.6	2.8	0.50
4317	75-80	11.0	5.6	83.4	LS	1.32	11.2	0.5	2.0	3.75
4318	80-85	10.2	6.7	83.1	LS	113.0	10.6	0.5	2.8	0.25
4319	85-90	9.7	4.1	86.2	LS	14.6	7.8	0.8	5.4	0.50
4320	90-95	10.8	4.4	84.8	LS	26.0	11.2	0.8	7.0	0.25
4321	95-100	10.7	6.4	82.9	LS	9.6	10.0	0.5	5.2	1.25
4322	100-105	10.9	5.9	83.2	LS	117.0	10.0	0.6	12.4	0.50
4323	105-110					84.0	30.0	1.2	11.1	0.50
4324	110-115					40.4	18.0	0.8	5.2	1.25
4325	115-120	16.2	32.2	51.6	L	11.2	73.3	1.8	5.4	0.50
4326	120-125	22.7	29.1	48.2	L	48.2	65.0	4.8	3.2	3.75
4327	148-150					40.4	7.2	1.2	4.0	3.75
4328	150-155					164.0	4.6	1.8	5.4	1.85
4329	155-160					[illegible]	22.0	1.4	10.0	3.00
4330	160-165					650.0	18.0	0.9	12.0	1.25
4331	164-170					146.0	49.0	1.1	10.4	2.50
4332	170-175					19.0	38.0	0.9	5.2	2.50
4333	175-180					5.4	44.0	0.8	4.0	0.25
4334	180-185					238.0	46.0	1.6	4.2	0.25
4335	185-190	49.4	27.2	23.4	C	14.6	102.0	2.0	11.1	0.25
4336	190-197	39.8	35.0	25.2	CL	8.7	105.0	3.2	17.8	0.25

Table 6 Chemical Analysis of Overburden and Interburden Materials Associated with Coal Areas.
Western Energy Coal Company Area A

Hole # [illegible] E50

Lab No.	Depth feet	Ex.NH$_4$ ppm	Se ppm	Hg ppb	B ppm	Pb ppm	Cd ppm	Ni ppm	Mo ppm	CEC meq/100gr
4302	0-5	14.0	<0.5		0.3	0.6	<0.3	<0.4	0.03	4.0
4303	5-10	13.0	<0.5		0.2	1.0	<0.3	<0.4	0.04	3.0
4304	10-15	14.0	<0.5		0.7	3.0	<0.3	3.2	0.25	21.0
4305	15-20	22.0	<0.5		0.7	3.5	<0.3	1.0	0.11	13.0
4306	20-25	13.0	<0.5		0.4	1.1	<0.3	<0.4	0.05	4.5
4307	25-30	20.0	<0.5		0.3	1.4	<0.3	<0.4	0.06	4.5
4308	30-35	11.0	<0.5		0.3	1.0	<0.3	<0.4	0.07	4.5
4309	35-40	12.0	<0.5		0.3	0.9	<0.3	<0.4	0.10	9.2
4310	40-45	12.0	<0.5		0.2	0.5	<0.3	<0.4	0.18	2.5
4311	45-50	10.0	<0.5		0.2	0.8	<0.3	<0.4	0.22	3.0
4312	50-55	6.0	<0.5		0.2	0.7	<0.3	<0.4	0.11	3.0
4313	55-60	5.0	<0.5		0.2	0.8	<0.3	<0.4	0.19	2.5
4314	60-65	8.0	<0.5		0.2	0.5	<0.3	<0.4	0.18	2.5
4315	65-70	8.0	<0.5		0.3	0.8	<0.3	<0.4	0.13	2.7
4316	70-75	10.0	<0.5		0.2	0.8	<0.3	<0.4	0.18	2.5
4317	75-80	10.0	<0.5		0.2	0.6	<0.3	<0.4	0.18	2.5
4318	80-85	28.0	<0.5		0.2	0.8	<0.3	<0.4	0.22	2.7
4319	85-90	9.0	<0.5		0.2	0.7	<0.3	<0.4	0.10	3.5
4320	90-95	11.0	<0.5		0.2	1.1	<0.3	<0.4	0.15	3.5
4321	95-100	5.0	<0.5		0.2	9.0	<0.3	<0.4	0.09	2.7
4322	100-105	4.0	<0.5		0.2	1.6	<0.3	<0.4	0.09	2.7
4323	105-110	17.0	<0.5		0.3	0.6	<0.3	<0.4	0.09	2.0
4324	110-115	7.0	<0.5		0.3	1.1	<0.3	<0.4	0.10	2.0
4325	115-120	17.0	<0.5		0.4	3.0	<0.3	0.5	0.17	5.5
4326	120-125	15.0	<0.5		0.8	5.1	<0.3	1.8	0.06	17.5
Coal	125-148									
4327	148-150	8.0	<0.5		2.7	3.5	<0.3	2.0	0.28	7.0
4328	150-155	13.0	<0.5		3.2	2.1	<0.3	3.0	0.20	13.0
4329	155-160	14.0	<0.5		4.0	1.4	<0.3	1.0	0.15	13.4
4330	160-165	12.0	<0.5		4.9	2.1	<0.3	1.0	0.14	20.0
4331	165-170	12.0	<0.5		2.2	2.2	<0.3	1.5	0.14	8.0
4332	170-175	13.0	<0.5		2.2	1.0	<0.3	1.0	0.11	3.7
4333	175-180	20.0	<0.5		0.9	1.6	<0.3	1.0	0.11	2.0
4334	180-185	18.0	<0.5		0.9	4.0	<0.3	2.0	0.16	9.5
4335	185-190	29.0	<0.5		0.8	5.9	<0.3	1.6	0.12	7.0
4336	190-197	27.0	<0.5		2.3	3.8	<0.3	1.9	0.19	7.0

Table 7 Chemical Properties of Soil for Overburden and Interburden Materials Associated with Coal Areas. Western Energy Coal Company, Area A.

Hole # N53 E49

Lab No.	Depth	pH Paste	Sat'n. %	Elec.t Cond. mmhos	Cations Ca	Cations Mg	Cations Na	SAR
					- - - - - -	meq/liter	- - - - - -	
4337	0-5	7.7	30.9	1.1	4.8	4.5	6.0	2.80
4338	5-10	7.8	32.9	6.9	25.0	45.1	28.3	4.77
4339	10-15	8.1	30.5	9.0	13.0	68.9	47.0	13.85
4340	15-20	8.0	30.9	7.3	21.6	42.3	35.4	6.26
4341	20-25	7.5	39.6	2.9	12.0	13.4	7.3	2.05
4342	25-31	7.2	56.7	4.2	21.5	23.0	8.8	1.87
4343	54-55	7.5	35.4	1.8	5.4	5.3	8.8	3.85
4344	55-60	7.0	32.3	2.0	5.6	5.7	8.4	3.52
4345	60-65	7.5	29.7	2.0	7.3	6.1	8.4	3.24
4346	65-70	7.5	27.4	2.7	7.3	7.2	12.4	4.64
4347	70-75	7.7	30.0	1.9	6.3	10.7	8.8	3.00
4348	75-80	7.8	30.8	3.7	13.5	20.8	11.3	2.72
4349	80-85	7.4	50.2	2.1	8.8	10.8	7.0	2.24
4350	85-90	7.6	35.8	3.1	15.0	14.3	8.2	2.12
4351	90-95	7.0	52.4	2.7	9.5	12.7	8.2	2.45
4352	95-100	7.4	57.4	2.2	7.8	11.1	6.9	2.26
4353	100-104	7.2	36.3	2.8	10.8	13.4	8.7	3.39

Table 8 Results of Mechanical Analysis (Hydrometer Method) with Micro Nutrients and Nitrates.
Western Energy Coal Company Overburden and Interburden, Area A

Hole # N53 E49

Lab No.	Depth	% Clay	% Silt	% Sand	Texture	Zn	Fe	Cu	Mn	NO_3
4337	0-5	8.8	20.0	71.2	SL	1.5	7.5	0.9	6.2	1.85
4338	5-10	21.8	17.2	61.0	SCL	3.0	9.0	1.1	5.8	28.40
4339	10-15	16.8	15.6	67.6	SL	2.0	11.9	0.9	5.8	3.75
4340	15-20	15.4	19.4	65.2	SL	2.2	30.0	0.6	11.7	1.85
4341	20-25	17.0	39.8	43.2	L	4.3	55.0	2.3	3.4	0.25
4342	25-31	44.4	30.4	25.2	C	3.8	44.0	5.2	3.4	0.25
4343	54-55	75.8	9.8	74.4	SL	4.8	9.0	1.2	1.0	0.50
4344	55-60	11.7	8.9	79.4	SL	4.5	8.0	1.1	0.1	0.50
4345	60-65	11.4	6.8	81.8	LS	3.9	21.5	0.9	2.8	0.50
4346	65-70	12.9	10.9	76.2	SL	1.96	49.0	0.8	3.6	1.25
4347	70-75					2.4	46.0	0.8	5.2	0.25
4348	75-80	10.4	8.8	80.8	LS	3.8	44.0	0.6	4.8	0.25
4349	80-85					3.7	39.0	0.9	5.4	0.25
4350	85-90					9.0	24.8	0.9	7.8	1.85
4351	90-95					200.0	80.0	2.3	19.1	0.50
4352	95-100	37.5	34.5	28.0	CL	9.0	63.0	2.2	13.8	2.50
4353	100-104					34.8	46.0	1.8	15.8	0.25

Table 2 Chemical Analysis of Overburden and Interburden Materials Associated with Coal Areas.
Western Energy Coal Company Area A

Hole # N53 E49

Lab No.	Depth feet	Ex.NH$_4$ ppm	Se ppm	Hg ppb	B ppm	Pb ppm	Cd ppm	Ni ppm	Mo ppm	CEC meq/100gr
4337	0-5	11.0	<0.5		0.5	0.9	<0.3	<0.4	0.06	5.5
4338	5-10	14.0	<0.5		0.8	1.4	<0.3	<0.4	0.04	9.5
4339	10-15	8.0	<0.5		0.3	0.8	<0.3	<0.4	0.24	5.5
4340	15-20	13.0	<0.5		0.4	1.0	<0.3	<0.4	0.26	6.7
4341	20-25	25.0	<0.5		0.4	4.0	<0.3	1.2	0.50	4.3
4342	25-31	26.0	<0.5		1.1	2.2	<0.3	4.8	0.16	18.0
Coal	31-54									
4343	54-55	13.0	<0.5		0.6	3.8	<0.3	<0.4	0.61	3.2
4344	55-60	15.0	<0.5		0.5	2.7	<0.3	<0.4	0.46	1.7
4345	60-65	9.0	<0.5		0.4	2.0	<0.3	<0.4	0.56	3.0
4346	65-70	11.0	<0.5		0.3	1.9	<0.3	<0.4	0.30	1.5
4347	70-75	19.0	<0.5		0.5	2.5	<0.3	1.0	0.18	1.7
4348	75-80	16.0	<0.5		0.5	2.1	<0.3	1.0	0.27	1.7
4349	80-85	12.0	<0.5		1.0	2.4	<0.3	0.6	0.29	2.7
4350	85-90	15.0	<0.5		2.0	3.8	<0.3	2.2	0.56	ns
4351	90-95	16.0	<0.5		2.1	4.0	<0.3	2.4	0.64	14.0
4352	95-100	26.0	<0.5		1.0	6.0	<0.3	2.2	0.44	10.0
4353	100-104	15.0	<0.5		1.6	5.0	<0.3	1.0	0.31	13.0

Table 10 Chemical Properties of Soil for Overburden and Interburden Materials Associated with Coal Areas. Western Energy Coal Company, Area A.

Hole # N51E53

Lab No.	Depth	pH 1:2 Ratio	Elect. Cond.*	Saturation Extract Cations Ca	Mg	Na	SAR
			mmhos/cm	- - - - -meq/liter-		- - - - -	
1630	0-10	8.7	0.22	1.25	.63	.31	.32
1631	10-17	8.9	0.24	1.63	.63	.09	.09
1632	17-29	8.7	0.37	0.13	2.84	.75	.61
1633	29-40	8.9	0.33	0.13	2.42	.7	.61
1634	40-45	9.1	0.31	.13	2.31	.62	.56
1635	45-49	9.2	0.53	2.13	2.73	.4	.34
1636	49-53	8.7	0.26	0.13	1.87	.77	.79
1637	53-54	8.2	0.43	1.5	2.21	.62	.45
Coal	54-77						
5701	77-79	8.0					
5702	79-82	8.0	2.71	9.68	12.75	4.70	1.47
5703	82-94	8.3	2.90	11.7	14.25	3.0	0.83
5704	94-99	8.7	2.11	7.13	9.5	4.48	1.56
5705	99-103	7.9	4.08	17.55	17.48	5.74	1.37
5706	103-106	8.2	2.58	9.0	11.1	5.74	1.81

* Calculation

Table // Results of Mechanical Analysis (Hydrometer Method) with Micro Nutrients and Nitrates.
Western Energy Coal Company Overburden and Interburden, Area A

Hole # N51353

Lab No.	Depth ft.	% Clay	% Silt	% Sand	Texture	Zn	Fe	Cu	Mn	No$_3$
1630	0-10	10.8	0.4	88.8	LS-	1.5	21.2	1.2	3.4	0.25
1631	10-17	12.8	2.4	84.8	LS	1.2	4.4	1.4	10.8	0.25
1632	17-29	32.8	34.4	32.8	CL	45.7	13.3	2.0	10.4	0.25
1633	29-40	14.8	26.4	58.8	SL	1.8	10.6	1.4	13.8	0.25
1634	40-45	14.8	20.4	64.8	SL	75.0	10.6	1.4	13.8	0.25
1635	45-49	14.8	4.4	80.8	SL-					
1636	49-53	26.8	4.4	68.8	SCL	13.1	13.5	2.0	8.0	0.25
1637	53-54	44.8	14.4	40.8	C-	10.6	17.0	3.2	7.4	0.25
Coal	54-77									
5701	77-79	45.2	32.4	22.4	C	6.5	110.0	5.0	9.5	0.1
5702	79-82	39.2	30.8	30.0	CL	150.0	28.8	3.2	4.0	0.1
5703	82-94	17.2	48.8	34.0	L	23.3	30.0	2.0	4.2	0.1
5704	94-99	13.2	36.8	50.0	L	18.1	52.6	1.4	5.2	0.1
5705	99-103	25.2	40.8	34.0	L	9.4	75.0	2.6	7.6	0.1
5706	103-106	33.2	38.8	28.0	CL	0.6	68.8	3.2	9.5	0.1

Table 12 Chemical Analysis of Overburden and Interburden Materials Associated with Coal Areas.
Western Energy Coal Company Area A

Hole # N51E53

Lab No.	Depth feet	Ex. NH_4 (ppm)	Se (ppm)	Hg (ppb)	B (ppm)	Pb (ppm)	Cd (ppm)	Ni (ppm)	Mo (ppm)
1630	0-10	4.0	< .5	11.0	0.4	0.3	0.5	.4	< 0.05
1631	10-17	8.0	< .5	11.0	0.3	0.5	0.5	.4	0.09
1632	17-29	20.0	< .5	21.0	0.4	2.0	0.5	1.2	0.22
1633	29-40	11.0	< .5	18.0	0.4	0.5	0.5	.4	0.11
1634	40-45	6.0	< .5	16.0	0.4	2.8	0.5	.4	0.06
1635	45-49	5.0	< .5	13.0	0.5	0.6	0.5	.4	0.08
1636	49-53	6.0	< .5	33.0	0.5	1.2	0.5	1.0	0.14
1637	53-54	14.0	< .5	86.0	0.4	2.0	0.5	2.4	0.07
Coal	54-77								
5701	77-79	12.0	-	-	2.6	6.0	1.0	1.4	0.38
5702	79-82	17.0	1.25	5.6	1.7	8.0	1.0	2.0	1.00
5703	82-94	14.0	1.25	3.2	0.9	2.2	1.0	1.2	0.47
5704	94-99	12.0	0.50	2.6	0.8	2.4	1.0	1.4	0.47
5705	99-103	11.0	0.50	5.0	1.8	4.8	1.0	1.8	0.65
5706	103-106	14.0	-	-	1.2	6.0	1.0	2.0	0.42

Table 13 Chemical Properties of Soil for Overburden and Interburden Materials Associated with Coal Areas. Western Energy Coal Company, Area A.

Hole # N52E50

				Saturation Extract			
		pH	Elect.	Cations			
Lab No.	Depth	1:2 Ratio	Cond.*	Ca	Mg	Na	SAR
			mmhos/cm	- - - - meq/liter- - - - - -			
1595	0-10	8.4	3.28	2.0	22.83	7.92	2.26
1596	10-20	8.1	6.77	23.71	16.22	27.77	6.23
1597	20-30	8.3	3.23	2.25	15.15	13.85	4.47
1598	30-40	8.5	2.78	4.25	13.07	10.49	3.57
1599	40-50	8.0	10.16	55.2	22.80	23.55	3.77
1600	50-62	8.1	6.64	40.0	21.36	5.06	.91
1601	62-64	8.2	6.19	17.0	37.99	6.91	1.32
1602	64-66	7.9	2.48	6.25	14.95	3.61	1.01
1603	66-68	7.8					
1604	68-69	7.8	0.62	1.25	3.89	1.01	.63

* Calculation

Table 14 Results of Mechanical Analysis (Hydrometer Method) with Micro Nutrients and Nitrates.
Western Energy Coal Company Overburden and Interburden, Area A

Hole # N52E50

Lab No.	Depth ft.	% Clay	% Silt	% Sand	Texture	Zn	Fe	Cu	Mn	No$_3$
1595	0-10	18.8	8.4	72.8	SL	1.5	3.9	1.8	5.8	0.25
1596	10-20	14.8	4.4	80.8	LS	5.4	6.6	1.6	6.7	0.25
1597	20-30	10.8	2.4	86.8	LS	18.1	6.3	0.9	8.2	0.25
1598	30-40	12.8	2.4	84.8	LS	5.4	6.0	1.6	6.7	0.25
1599	40-50	10.8	0.4	88.8	LS	6.0	6.0	1.6	6.7	0.25
1600	50-62	12.8	2.4	84.8	LS	5.5	8.4	1.1	3.6	0.25
1601	62-64	20.8	30.4	48.8	L	68.8	48.8	1.6	10.0	0.25
1602	64-66	44.8	22.4	32.8	C-	61.3	55.0	2.9	5.2	0.25
1603	66-68	40.8	24.4	34.8	C-	72.5	30.6	4.8	4.2	0.25
1604	68-69	32.8	18.4	48.8	SCL	40.6	30.0	5.6	3.2	0.25

Table 15 Chemical Analysis of Overburden and Interburden Materials Associated with Coal Areas.
Western Energy Coal Company Area A

Hole # N52E50

Lab No.	Depth feet	Ex.NH_4 (ppm)	Se (ppm)	Hg (ppb)	B (ppm)	Pb (ppm)	Cd (ppm)	Ni (ppm)	Mo (ppm)
1595	0-10	3.0	<.5	8	0.4	0.4	<.5	.4	0.07
1596	10-20	7.0	<.5	15	0.6	0.3	<.5	.4	0.12
1597	20-30	5.0	<.5	15	0.4	0.1	<.5	.4	0.37
1598	30-40	2.0	<.5	15	0.2	0.1	<.5	.4	0.13
1599	40-50	2.0	<.5	30	0.2	0.1	<.5	.4	0.07
1600	50-62	6.0	<.5	30	0.1	0.4	<.5	.4	0.17
1601	62-64	19.0	<.5	26	0.7	10.0	<.5	.4	0.15
1602	64-66	16.0	<.5	43	1.5	[illegible]	<.5	1.2	0.31
1603	66-68	12.0	<.5	143	0.9	4.7	<.5	3.6	0.11
1604	68-69	14.0	<.5	110	0.7	1.6	<.5	2.4	0.11

APPENDIX II

RESOLUTION OF ABANDONMENT

The County Commission of Rosebud County, Montana, in regular session the 11th day of July, 1974, on motion of Commissioner Ed McCaffree, seconded by Commissioner Thomas A. Dekeny, and unanimously approved, duly passed the following Resolution:

BE IT RESOLVED THAT: WHEREAS, a petition was duly filed with this Commission by the Western Energy Company requesting the abandonment of a portion of the Castle Rock Road West of Colstrip, Montana, and seeking to have that portion of the said Castle Rock Road relocated, as follows:

> That the County abandon that portion of the Castle Rock Road commencing at a point of intersection with Highway 315, approximately at the Section corner, the Sections 33 and 34, Township 2N, Range 41E and Sections 3 and 4, Township 1N, Range 41E, proceeding thence Westerly along the Section line dividing the said Section 33 and the said Section 4 to the Northwest corner of the said Section 4, thence proceeding diagonally Southwesterly across Section 5, Township 1N, Range 41E, to a point near the Southeast corner of the Southeast Quarter of Section 6, Township 1N, Range 41E, M.P.M., all being in Rosebud County, Montana. Said petition further recited that the petitioners would procure a right-of-way and construct and deliver over to the County title to a replacement road commencing at the Northwest Quarter of Section 3, Township 1N, Range 41E at the point of intersection with Highway 315, proceeding thence West and South through Sections 4 and 5, Township 1N, Range 41E to intersect with existing Castle Rock Road in the Southeast Quarter of Section 6, Township 1N, Range 41F, M.P.M., all in Rosebud County, Montana.

Due notice having been published of intent to hear protests to the abandonment of the Castle Rock Road as above described, said meeting was held this date and no protests were made, whereas, representatives of the Western Energy Company advised the County Commission they would obtain for the County easements for the location of the replacement road, that the State Highway Commission of the State of Montana had approved the said relocation and that the new road proposed to be built would be 26' in width (travel area) with a 60' right-of-way, would be built and graveled at the expense of Montana Power Company and then delivered over to the County of Rosebud and that as coal mining operations were to take place in the area the Montana Power Company would build at its own expense, and repair as necessary in the event of any damage caused by its own vehicles or its own operations, an underpass whereby coal hauling vehicles and other vehicular traffic connected exclusively with coal mining operation in the area would be able to pass under the proposed new road; and that the same would be completed or was proposed to be completed by the fall of 1974;

NOW, THEREFORE, IT IS RESOLVED THAT that portion of the Castle Rock Road petitioned to be abandoned and vacated is, contingent upon completion and opening of the proposed replacement road, abandoned; but the same shall continue to be used and maintained as necessary until such time as the proposed replacement road has been completed, found to be acceptable and accepted by the County of Rosebud; that at such time as the replacement road has been accepted and is open to public traffic, the abandonment herein recited becomes effective and at that time, upon delivery to Rosebud County of satisfactory title in and to the proposed replacement road, the Chairman of this Board is authorized to execute quick claim deeds describing the portions of the Castle Rock Road to be then abandoned, conveying the same, according to statute, to the abutting owners as their interest at such time may be.

Done this 11 day of July, 1974.

(S) Thomas A. Devine

(S) Ed. McCaffree

COMMISSIONERS.

ATTEST:

(S) Doris Jean Strong

Deputy County Clerk and Recorder.

(Seal)

STATE OF MONTANA
County of Rosebud) ss.
OFFICE OF COUNTY CLERK & RECORDER

I hereby certify that the annexed is a correct transcript of the original remaining on file or record in my office together with the endorsements thereon contained.

Witness my hand and officia

seal July 11, 1974

County Clerk and Recorder

By Doris Jean Strong
Deputy

This statement has been provided to:

Federal

Mr. A. F. Czarnowsky
Area Mining Supervisor
U. S. Department of Interior
Geological Survey
Conservation Division
P. O. Box 2550
Billings, Montana 59103

Mr. A. B. Linford
State Conservationist
U. S. Soil Conservation Service
P. O. Box 970
Bozeman, Montana 59715

Mr. Steve Yurich
Regional Forester
U. S. Forest Service
Federal Building
Missoula, Montana 59801

Mr. Edwin Zaidlicz
State Director
Bureau of Land Management
316 North 26th Street
Billings, Montana 59101

State

Dr. John Anderson, Director
Department of Health and Environmental Sciences
Cogswell Building
Helena, Montana 59601

Mr. E. W. "Bill" Christiansen
Lieutenant Governor
Capitol Building
Helena, Montana 59601

Dolores Colburg
Superintendent of Public Instruction
State Capitol Building
Helena, Montana 59601

Documents Librarian
Montana State Library
930 East Lyndale
Helena, Montana 59601

Dr. Sid Groff
Montana College of Mineral Science & Technology
West Park Street
Butte, Montana 59701

Mr. Robert Hall
Department of Highways
Helena, Montana 59601

Mr. Richard Hodder
Research Associate
Montana State University
Agricultural Experiment Station
Bozeman, Montana 59715

The Honorable Thomas L. Judge
Governor of Montana
Capitol Building
Helena, Montana 59601

Mr. George Lackman
Department of Agriculture
Helena, Montana 59601

Mr. Frank Murray
Secretary of State
State Capitol Building
Helena, Montana 59601

Mr. E. V. "Sonny" Omholt
State Auditor
State Auditor's Office
Capitol Building
Helena, Montana 59601

Mr. James A. Posewitz
Chief, Environment & Information
Fish and Game Department
Sam W. Mitchell Building
Helena, Montana 59601

Mr. Ron Richards
Department of Intergovernmental Relations
1424 Ninth Avenue
Helena, Montana 59601

Mr. John Ruess
Executive Director
Environmental Quality Council
State Capitol Building
Helena, Montana 59601

Mr. Gary J. Wicks, Director
Department of Natural Resources & Conservation
Sam W. Mitchell Building
Helena, Montana 59601

Mr. Robert L. Woodahl
Attorney General
State of Montana
State Capitol Building
Helena, Montana 59601

Private

Mr. Edward M. Dobson
Friends of the Earth
P. O. Box 882
Billings, Montana 59103

Environmental Information Center
P. O. Box 12
Helena, Montana 59601

Mr. Mike Grende
Western Energy Company
Colstrip, Montana 59323

Ms. Fern Hart
League of Women Voters
16 Carriage Way
Missoula, Montana 59801

Mr. John Leshy
Natural Resources Defense Council
664 Hamilton Avenue
Palo Alto, California 94301

Mr. Duke McRae
Rosebud County Protective Association
Forsyth, Montana 59327

Mrs. Mavis McKelvey
Montana League of Conservation Voters
1740 Madeline Avenue
Missoula, Montana 59801

Mr. Kit Muller
Northern Plains Resource Council
437 Stapleton Building
Billings, Montana 59101

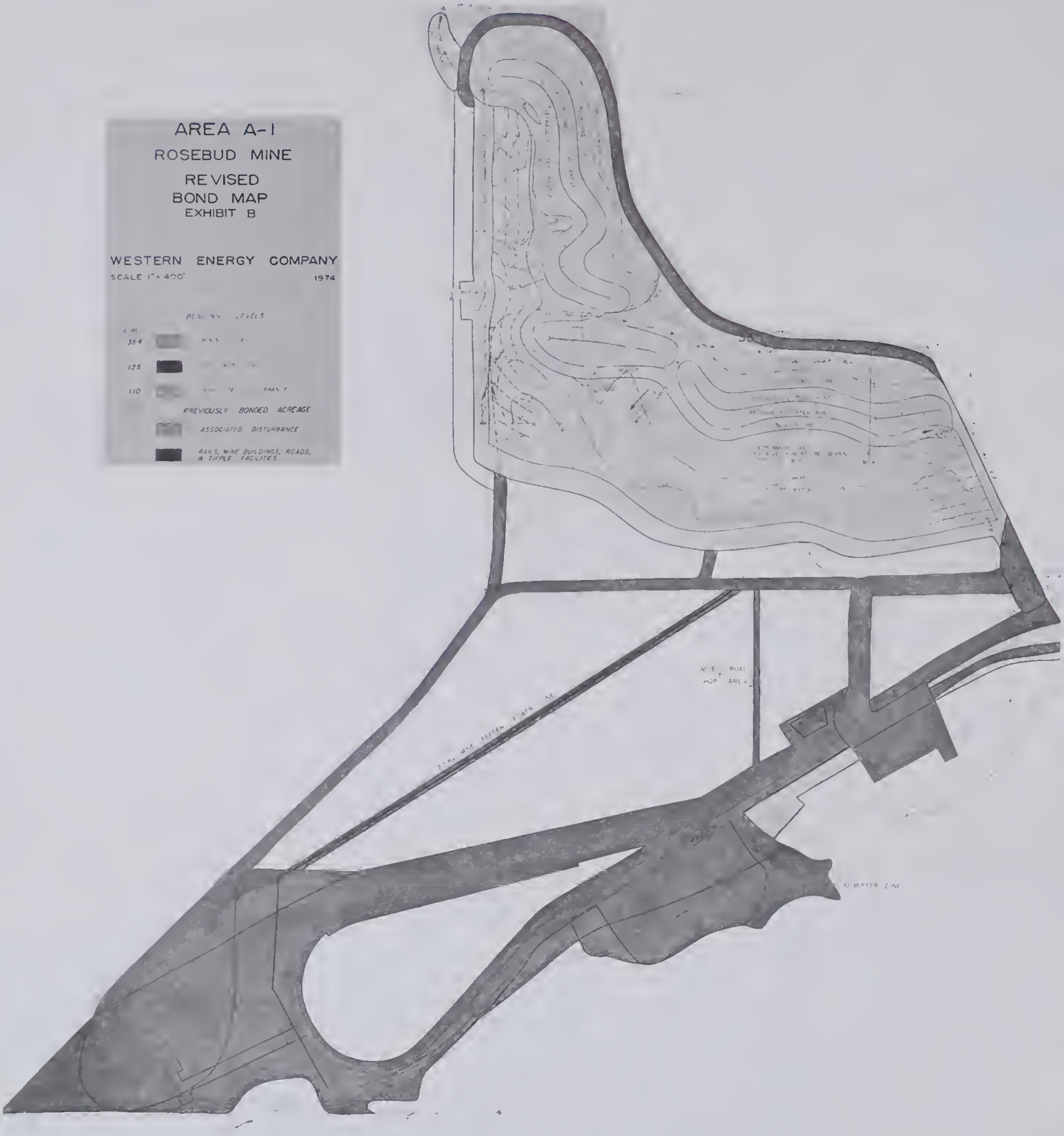
Northern Rockies Action Group
9 Placer Street
Helena, Montana 59601

Mr. Roger Rice
Senior Exploration Geologist
Western Energy
113 North Broadway
Billings, Montana 59101

County Commissioners
Rosebud County
Forsyth, Montana 59327

Mr. John Ross
Environmental Attorney
Western Energy
40 East Broadway
Billings, Montana 59101

WMCIPI Library
(Western Montana Scientists Committee for Public Information)
University of Montana
Room 208A
Natural Sciences Building
Missoula, Montana 59801


AREA A-1
ROSEBUD MINE
REVISED
BOND MAP
EXHIBIT B
WESTERN ENERGY COMPANY
SCALE 1" = 400'
1974
364
125
110
PREVIOUSLY BONDED ACREAGE
ASSOCIATED DISTURBANCE
RAILS, MINE BUILDINGS, ROADS, & TIPFLE FACILITIES
BUFFER ZONE